(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau

TIPO PMP

(43) International Publication Date 17 June 2004 (17.06.2004)

PCT

(10) International Publication Number WO 2004/051994 A1

(51) International Patent Classification⁷: G02F 1/1347 H04N 5/74,

(21) International Application Number:

PCT/US2003/037977

(22) International Filing Date:

26 November 2003 (26.11.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/430,896

4 December 2002 (04.12.2002) US

(71) Applicant (for all designated States except US): THOM-SON LICENSING S. A. [FR/FR]; 46 Quai A. Le Gallo, F-92648 Boulogne Cedex (FR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): DRAZIC, Valter [FR/FR]; 7 Allee du Pigeon Blanc, F-35830 Betton (FR). HALL JR, Estill, Thone, [US/US]; 9978 Niagara Drive, Fishers, IN 46038 (US). O'DONNELL, Eugene, Murphy [US/US]; 7594 Timber Springs Drive, Fishers, IN 46038 (US).

(74) Agents: TRIPOLI, Joseph, S. et al.; c/o THOMSON Licensing Inc., 2 Independence Way, Suite #2, Princeton, NJ 08540 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

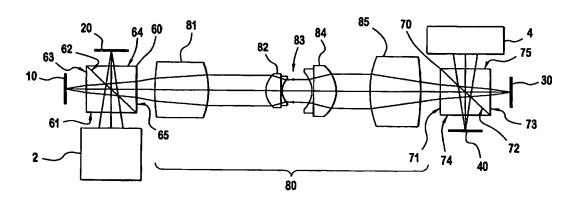
Published:

with international search report

 before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: HIGH CONTRAST STEREOSCOPIC PROJECTION SYSTEM



(57) Abstract: A stereoscopic projection system is provided having two channels, each having two LCOS imagers that modulate light on a pixel-by pixel basis. A first polarizing beam splitter is configured to direct light of a first polarization onto a first channel first stage LCOS imager and direct light of a second polarization, opposite the first polarization, onto a second channel first stage LCOS imager. A relay lens system directs the output of the first stage imagers into a second polarizing beam splitter. The second polarizing beam splitter is configured to direct light of the second polarization onto the first channel second stage LCOS imager and direct light of the first polarization onto the second channel second stage LCOS imager.



INTERNATIONAL SEARCH REPORT

Into lional Application No
PCT/US 03/37977

A. CLASSIF IPC 7	HOANS/74 GO2F1/1347						
According to	International Patent Classification (IPC) or to both national classification	on and IPC	·				
B. FIELDS S							
	cumentation searched (classification system followed by classification HO4N GO2F	symbols)					
Documentati	ion searched other than minimum documentation to the extent that suc	h documents are included in the fields sea	rched				
	ata base consulted during the international search (name of data base	and, where practical, search terms used)					
C. DOCUME	ENTS CONSIDERED TO BE RELEVANT						
Category °	Citation of document, with indication, where appropriate, of the relev	ant passages	Relevant to claim No.				
Υ	PATENT ABSTRACTS OF JAPAN vol. 1997, no. 08, 29 August 1997 (1997-08-29) & JP 09 096780 A (NIPPON HOSO KYOK <nhk>), 8 April 1997 (1997-0</nhk>		1-3,6-8, 11,12				
Y	US 4 364 039 A (PENZ PERRY A) 14 December 1982 (1982-12-14) column 1, line 45 -column 2, line	9	1-3,6-8, 11,12				
A	US 2002/159033 A1 (VAN GELDER ROLA AL) 31 October 2002 (2002-10-31) paragraph '0007!	AND ET	6				
Further documents are listed in the continuation of box C. X Patent family members are listed in annex.							
"A" docum	nent defining the general state of the art which is not idered to be of particular relevance	T* tater document published after the inte or priority date and not in conflict with cited to understand the principle or the invention	the application but				
filing "L" docum which citatio	date tent which may throw doubts on priority claim(s) or h is cited to establish the publication date of another on or other special reason (as specified)	 'X' document of particular relevance; the cannot be considered novel or cannot involve an inventive step when the delay document of particular relevance; the cannot be considered to involve an indocument is combined with one or m 	t be considered to current is taken alone claimed invention ventive step when the				
°P° docum	ment referring to an oral disclosure, use, exhibition or reans needs of the international filing date but than the priority date claimed	ments, such combination being obvio in the art. *&* document member of the same patent	us to a person sidiled				
——	e actual completion of the international search	Date of mailing of the international sea	arch report				
5 April 2004		15/04/2004					
Name and	mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk	Authorized Afficer					
	Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Wahba, A					



Information on patent family members

Interstional Application No PCT/US 03/37977

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
JP 09096780	Α	08-04-1997	NONE		
US 4364039	Α	14-12-1982	US	4547043 A	15-10-1985
US 2002159033	A1	31-10-2002	WO US	02089493 A2 2004008291 A1	07-11-2002 15-01-2004